STOA-NEWS

New STOA projects

Eco-efficient transport – "User perceptions on eco-efficient transport futures for Europe"

Transport is a key factor for economic development and wealth in modern societies and is faced with serious challenges such as congestion, emissions of noise and hazardous pollutants, CO_2 emissions accelerating climate change, land use or the segregation effects of roads. In recent years a lot of progress has been made in EU countries, mainly by the introduction of technologies such as modern information systems for public transport, more efficient engines or soot filters and catalytic converters to limit those negative effects. However, transport demand is steadily increasing and is expected to grow further in the next decades. The challenge for future transport policy is to overcome the paradox of transport becoming ever more efficient on the one hand and the steady growth in transport volume on the other hand. A transition to a more eco-efficient transport system is needed to cope with recent challenges and the anticipated future developments in the transport sector.

The STOA project (running from January 2011 up to March 2013) will be based on the work done in previous STOA projects and is closely related to the running STOA project on "Urban Transport". The research focus is on i) potentials of different technologies and concepts supporting eco-efficient mobility and ii) on policy measures for tapping these potentials. Further, iii) the perceived role of the demand side, in particular of citizens, should be a central issue. Regarding i), a broader range of technologies and concepts should be covered, among them alternative fuels and propulsion technologies (with particular focus on electric and biomass based propulsion systems), ICT technologies, new infrastructure approaches but also innovative business models such as car sharing. Regarding policy measures (ii), policies on European level should be the key issues. In relation to the demand side the following key questions will be further elaborated and specified:

- Which transport systems and which technology options and regulations do citizens prefer in pursuing sustainability aims/targets for (passenger) transportation?
- What are the motivations of users/consumers for the adaptation or rejection of an eco-efficient innovation? How do eco-efficient technologies and concepts in the passenger sector need to be designed to make them attractive for the users?
- How should solutions for eco-efficient transport be designed to become attractive for citizens (including user-friendliness, costs, reliability, punctuality, speed etc.)?

Contact
Jens Schippl, ITAS, jens.schippl@kit.edu

Security of eGovernment Systems

The world is becoming increasingly digitized, and this presents opportunities for everyone – including governments. The ability to make public services easily available online is an alluring prospect for governments, not just because of the immediate benefits this would give to the citizens in terms of easy access to the public sector, but also because of the potential benefits of cost-savings and increased efficiency. Consequently governments are looking to exploit these advantages to address the ever-present universal problem of stressed public finances. But eGovernment is no panacea; it brings benefits but also new threats that need to be addressed. Some of these are the security challenges related to increased use of eGovernment systems.

To handle these issues on a European level the Danish Board of Technology, the Rathenau Institute and the ITAS have been asked by STOA, the European Parliament's panel for Science and Technology Option Assessment, to carry out a project to examine the challenges and threats that the implementation of eGovernment might pose to the privacy and security of the data of European citizens, organizations and institutions. In order to do so the project will focus on some of the main areas in which the implementation of

eGovernment will have an influence on European citizens. These will be areas such as e-Procurement, e-ID and e-Health. The issues that will be addressed will range from data security to privacy, usability, interoperability and more.

The goal of the project will be to make policy makers aware of the problems and threats that might arise as a consequence of digitizing the European public sector, in order to prepare for well-informed decisions on the future implementation of eGovernment in Europe.

The project has been launched 1st of April this year. As part of the project a conference debating security of eGovernment will be arranged at the beginning of 2012.

Contact
Anders Jacobi, DBT, aj@tekno.dk

« »

Workshop on e-voting in the European Parliament

Can e-voting increase electoral participation?

Considering the low participation rates in European Parliament elections, efforts to increase it and get Europeans involved in European policy are crucial. One way forward may be e-voting, especially among young voters who could theoretically do it between watching YouTube videos and checking Facebook. However, technical and political issues are still unsolved. The Parliament's Science and Technology Options Assessment panel (STOA) held a hearing on the pros and cons of e-voting on 17 March, 2011. It was organised by the ETAG partner Fraunhofer Institute for Systems and Innovation Research (ISI) as part of the running project on e-democracy.

As Parliament's Vice President Silvana Koch-Mehrin put it: "How we can involve citizens is important from a European point of view." At her opening speech she emphasized that it is not only important to increase voter turnout at European elections but also to better involve citizens throughout the legislative process. Bernd Beckert from the Fraunhofer-ISI presented the pros and cons to MEPs mentioning the most popular argument in favour of e-voting being: "we already have e-commerce, e-education, e-administration – why shouldn't we also elect our parliaments over the Internet?" By offering e-voting, especially young people could be motivated to take part in elections they would otherwise ignore, so the argument of supporters of e-voting. However, when presenting the arguments of opponents of e-voting, he added that e-voting is not the same as e-commerce – elections are an essential part of democracy and if there is anything that potentially threatens the core values of it, like flawed elections, it must be called off. Another concern is transparency in e-voting as voters cannot be sure that the vote is being transmitted. In contrast to paper and pen elections, e-voters cannot verify if their vote is correctly stored and counted.

Estonia – the most prominent example

Estonia is currently the only country in the world where voting over the Internet is possible in binding parliamentary elections. It was introduced in 2005 as an additional way cast one's vote using an electronic signature card and two PINs. Since 2005, e-voting has been used in Estonian national as well as EP elections. Since its introduction, more and more people have made use of the option to vote via the Internet: E-votes cast have increased from 2 % of all votes cast in 2005 to 5.4 % in 2007, 15 % in 2009 and reached 24.3 % in 2011. Whereas these numbers indicate that people in Estonia start to get familiar with the process of voting online, they do not tell much about the overall electoral participation. In fact, the overall participation was high in some elections and low in others.

Concerning the young group of voters, the e-voting participation results were disappointing: A constant share of only about 10 % of the young voters have cast their vote over the Internet. Furthermore there are reports of possible manipulations of the Estonian system which again hint to the fact that as of today there are no absolutely secure e-voting systems available. Whereas no expert from Estonia was present at the workshop because of the current national elections there,

the speakers at the hearing were well aware of the developments in Estonia and familiar with the technical system used there.

Discussion of e-voting possibilities and threats

Participants agreed that the effect of e-voting on voter participation remains unclear. "With e-voting you can vote wherever you are, whenever you want – we don't have evidence but this must increase participation," said **Rüdiger Grimm** (University of Koblenz, IT risk management).

Barbara Simons (IT security expert, formerly IBM Research, US) was sceptical and said that e-voting is an idea whose time has not come. As long as the systems have security problems and can be hacked or disturbed by computer viruses and worms, people will not and should not use e-voting as a means to elect parliaments.

Alexander Prosser (University of Economics and Business Administration, Vienna) also reported of problems with e-voting trials but claimed that properly managed, these systems could at least be used for referenda, party-internal elections or large-scale administrative procedures. Concerning Europe, he was convinced that in the long run such a diverse and heterogeneous union will have to make use of e-media in order to involve all citizens.

Anne-Marie Oostveen (University of Oxford, Oxford Internet Institute) pointed to the fact that there is still not enough empirical evidence concerning the effects of e-voting on a large scale. From smaller projects it can be said that the novelty wears off quickly and that the overall turnout will not increase in the long run.

Susanne Caarls (Council of Europe, Strasbourg, Programme Advisor) again referred to Estonia where she was involved as an advisor and said that there is a chance that turnout could rise if there is an added value for the voter and if the technology is well designed and does not work as a barrier.

Conclusions

Summarizing the discussion it can be stated that experts and participants were rather sceptical concerning the chances to introduce e-voting in Europe. One reason for this is that the technical requirements to carry out legally binding elections over the Internet are very high. In countries where digital signatures and card readers are not available for all citizens, e-voting does not mean a more comfortable way to vote but in fact is much more complicated as it requires the e-signature, PINs and TANs and multiple identification processes.

Although there seems to be a necessity to offer more possibilities to Europeans to exchange their views and participate in political processes via the Internet, e-voting as such will most probably not result in an increase of voter participation. In fact the reasons for voting abstinence are manifold and there seems to be no technological quick-fix to the problem. Rather, non-technical aspects like the relevance of the institution to be elected or the immediacy of the issues or positions at stake must be considered when attempting to increase voter participation. Especially with respect to elections of the European Parliament these aspects are of central relevance. On the other hand, supporting e-participation processes like the European Citizens' Initiative (ECI) with experiences from e-voting projects may be one way forward in testing the possibilities of e-voting for the future.

Video of the event (http://www.europarl.europa.eu/wps-europarl-internet/frd/ vod/player;jsessionid=5F935C67D79450A857689A1341A4E8F9?category=SPECIAL&eventCode=20110317-0930-SPECIAL&format=wmv&byLeftMenu= researchotherevents&language=en#anchor1).

Contact
Bernd Beckert, Fraunhofer-ISI,
Bernd.Beckert@isi.fraunhofer.de

« »